

WHAT IS CLAIMED IS:

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1. A data transmission apparatus transmitting data received from a user terminal device through a plurality of networks to a destination, said user terminal device executing  
10 communication using an Internet protocol, said data transmission apparatus comprising:

a routing table storing information relating a destination address of the data and addresses of the plurality of networks;  
15 an information table storing static and dynamic information about the plurality of networks; and

a selection unit selecting one or the plurality of networks, through which said data  
20 transmission apparatus transmits the data to the destination, based on said static and dynamic information.

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2. The data transmission apparatus as claimed in claim 1, wherein said information table stores the static and dynamic information about a  
30 plurality of service classes included in a network, wherein said selection unit selects one or the plurality of service classes, through which said data transmission apparatus transmits the data to the destination, based on said static and dynamic  
35 information about the plurality of service classes.

3. The data transmission apparatus as claimed in claim 1, wherein a part or all of the plurality of networks include a plurality of service classes, wherein said selection unit selects a  
5 service class included in a network, through which said data transmission apparatus transmits the data to the destination, based on the static and dynamic information about the plurality of networks and of the plurality of service classes.

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4. The data transmission apparatus as  
15 claimed in claim 3, further comprising a monitoring unit monitoring conditions of said plurality of networks, wherein said selection unit changes the service class if said monitoring unit detects a change in the conditions of said plurality of  
20 networks.

25 5. The data transmission apparatus as claimed in claim 4, further comprising a rewriting unit rewriting said routing table by referring to said information table if the dynamic information stored in said information table is changed as a  
30 result of detection of the change in the conditions of said plurality of networks.

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6. The data transmission apparatus as claimed in claim 4, wherein said monitoring unit

obtains the dynamic information about said plurality of networks from network information disclosed by said plurality of networks.

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7. The data transmission apparatus as claimed in claim 4, wherein said monitoring unit  
10 obtains the dynamic information about said plurality of networks by transmitting a packet for collecting network information.

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8. The data transmission apparatus as claimed in claim 7, wherein said monitoring unit transmits a message packet to the destination for  
20 collecting the network information, receives an acknowledgement from the destination in response to the message packet, and obtains communication traffic information about the plurality of networks as the dynamic information about the plurality of  
25 networks to the destination, in an TCP/IP (Transmission Control Protocol/Internet Protocol) communication.

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9. The data transmission apparatus as claimed in claim 7, wherein said monitoring unit transmits an ICMP (Internet Control Message  
35 Protocol) timestamp request message to the destination, receives an ICMP timestamp response message from the destination, and obtains

communication traffic information about the plurality of networks as the dynamic information about the plurality of networks to the destination from a timestamp of the ICMP timestamp response message.

10                   10. A method of transmitting data from a user terminal device through a plurality of networks to a destination, said user terminal device executing communication using an Internet protocol, said method comprising the steps of:

15                   storing information relating a destination address of the data and addresses of the plurality of networks in a routing table;

                    storing static and dynamic information about the plurality of networks in an information

20                   table; and

                    selecting one or the plurality of networks, through which the data is transmitted to the destination, based on said static and dynamic information.

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                    11. The method as claimed in claim 10,

30                   comprising the steps of:

                    storing the static and dynamic information about a plurality of service classes included in a network, in said information table; and

                    selecting one or the plurality of service

35                   classes, through which the data is transmitted to the destination, based on said static and dynamic information about the plurality of service classes.

12. A transmission apparatus transmitting  
data received from a user terminal through a  
plurality of networks to a destination, said user  
terminal executing communication using an Internet  
5 protocol, said transmission apparatus comprising:  
means for storing information relating a  
destination address of the data and addresses of the  
plurality of networks;  
means for storing static and dynamic  
10 information about the plurality of networks; and  
means for selecting at least one of the  
plurality of networks, through which said  
transmission apparatus transmits the data to the  
destination, based on said static and dynamic  
15 information.

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